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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,301

04/25/2007

Martin Paul Wilson

9811-001US

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79526

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EXAMINER

RILEY, SHAWN

ART UNIT

PAPER NUMBER

2838

MAIL DATE

DELIVERY MODE

09/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,301	Applicant(s) WILSON, MARTIN PAUL	
	Examiner Shawn Riley	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2009 amendment and remarks.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-26, 28-34 and 36-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-26, 28-34 and 36-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>April 09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Reponse to applicants remarks and amendments

1. Applicant's remarks and amendments of 26 May 2009 have been considered but deemed moot in light of the new non-final rejection.

Claim Rejections - 35 U.S.C. § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

D3:US20030158478

D4:US20020057171

D5:SU1001396

D6:JP8149899

D7:GB717075 (note that above references were already supplied in IDS)

3. Claims 1, 16, 26, and 40 are rejected under 35 U.S.C. §102(b) as being fully anticipated by US20030158478 (D3) and by US20020057171 (D4).

The document D3 shows a transformer (Figure 7; sections 0042, 0043) which sums voltages applied to its primary and secondary windings ($V_{out} = V1 + V2 + V3$). This known transformer thus comprises all the features of claims 1, 16, 26, and 40.

The document D4 shows a transformer (Figure 9) which has the same arrangement of transformer windings as defined in claims 1, 16, 26 and 40. Four primary winding turns [layers 1, 3, 5 and 7] are arranged between four secondary winding turns [layers 2, 4, 6 and 8] by which close inductive coupling between the primary winding and the secondary winding is achieved. Thus, D4 shows all the features of claims 1, 16, 26 and 40.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-14, 17-25, 28-34, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over D3 or D4 as described above in view of D5 or D6 or D7.

The features contained in dependent 2-14, 17-25, 28-34, and 36-39 seem to correspond to embodiments of circuit design in the field of inductive coupling of different voltage waveforms which is known in the art as is shown by documents D5, D6, and D7.

1. A voltage summer including a transformer having a primary side and a secondary side, wherein a first voltage to be summed is connected to the primary side and a second voltage to be summed is connected to the secondary side.
2. A voltage summer according to claim 1, wherein the first voltage is connected between the first tap of the primary side and the second tap of the primary side, and the second voltage is connected to a first tap of the secondary side, a summed voltage being provided on a second tap of the primary or secondary side.
3. A voltage summer according to claim 2, wherein the first voltage is greater than the second voltage and the summed voltage is provided on the second tap of the primary side of the transformer.
4. A voltage summer according to claim 1 wherein the first voltage is a variable voltage.
16. A method of summing voltages including applying a first voltage to a primary side of a transformer and applying a second voltage to a secondary side of the transformer, wherein a sum of the first and second voltages is provided on one of the first or second sides of the transformer.
17. A method according to claim 16, wherein the first voltage is applied between the first tap of the primary side and the second tap of the primary side, and the second voltage is applied to a first tap of the secondary side, wherein a summed voltage is provided on a second tap of the primary or

secondary side.

18. A method according to claim 17, wherein the first voltage is greater than the second voltage and the summed voltage is provided on the second tap of the primary side of the transformer.

19. A method according to claim 16 further comprising the step of varying the first voltage.

20. A method according to claim 16 further comprising the step of varying the second voltage.

Allowable Subject Matter

4. No claims are allowable.

Conclusion

N.B. Any inquiry from other than the applicant/attorney of record (THAT INCLUDES SECRETARIAL AND ANY OTHER TYPE OF SUPPORT STAFF) concerning this communication or earlier communications from the Examiner should be directed to the Patent Electronic Business Center (EBC) at 1.866.217.9197.

Any inquiry from a member of the press concerning this communication or earlier communications from the Examiner or the application should be directed to the Office of Public Affairs at 703.305.8341. Any inquiry from the applicant or an attorney of record concerning this communication or earlier communications from the Examiner should be directed to Examiner Riley whose telephone number is 571.272.2083. The Examiner can normally be reached Monday through Thursday from 7:30-6:00 p.m. Eastern Standard Time. The Examiner's Supervisor is Monica Lewis can be reached on 571-272-1838. Any inquiry about a case's location, retrieval of a case, or receipt of an amendment into a case or information regarding sent correspondence to a case **should be directed to 2800's Customer Service Center** at 571.272.2815. Any papers to be sent by fax MUST BE sent to fax number **571-273-8300**. Any inquiry of a general nature of this application should be **directed to the Group receptionist** whose telephone number is 571.272.2800. Status information of cases may be found at <http://pair-direct.uspto.gov> wherein unpublished application information is found through private PAIR and published application information is found through public PAIR. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Further help on using the PAIR system is available at 1.866.217.9197 (Electronic Business Center). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 09

/Shawn Riley/
Primary Examiner AU 2838